ZARGES –
Access.
Packaging.
Transportation.
Special construction.

At ZARGES, our focus is on the customer. Innovative standard products, special solutions or comprehensive service – every day, our customers can rely on the safety and high quality of our range.

Further information is available on the Internet or from your ZARGES distributor.

www.zarges.com

Special Solutions
for Aviation

The products shown here are only an excerpt from our overall range.
Our solutions at a glance

- Configurator for steps and bridging steps
- Universal maintenance stairs with fixed height
- Universal maintenance stairs, height-adjustable
- Special maintenance stairs and platforms
- Aircraft docking systems for maintenance, repair and overhaul (MRO)
- Helicopter docking systems
- Refuelling equipment
- Other maintenance equipment and accessories
- Special containers for transport and storage
We can find the right solution for you – challenge us.

IDEA & OFFER
- Standardised and individual solutions.
- Solutions devised with our specialist consultant.
- Competent and well-thought-out ideas.
- Customised to your specifications.

IMPLEMENTATION & REALISATION
- Quick solutions through standardisation.
- Swift implementation and delivery.
- On-site assembly by our specialist personnel possible.
- High quality and safety.
- Compliance with all relevant standards.
- TÜV-tested constructions.

SERVICE & SUPPORT
- Technical documentation.
- Reliable supply of spare parts.
- Seminars and training courses.
- Product testing.
- After-sales service.
- Prompt assistance in the event of problems.

Our constructions are compliant to following norms and standards:
DIN EN 1915
- Part 1 – Basic safety requirements.
- Part 2 – Stability and strength.

DIN EN 12312
- Aircraft ground support equipment.
- Part 5 – GSE equipment for aircraft refuelling.
- Part 8 – Maintenance stairs and platforms.

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ZARGES offers you individually configurable steps and bridging steps as access, precisely adapted to your requirements.

Find out for yourself. Use our configurator, plan your individual product step by step and immediately receive the matching offer, including engineering design drawing and 3D CAD model, at: www.zarges-creaxess.com.

Other product benefits:
- Delivery within 10 working days within Germany.
- Fast and simple assembly as a result of plug-in connections, screwed connections reduced to a minimum.
- Tested by German Technical Inspection Association complying with DIN EN ISO 14122.
ZARGES universal maintenance stairs with fixed heights can be used for a wide range of aircraft. Their short set-up times keep downtimes to a minimum. Easy to manoeuvre manually or by traction vehicle.

Technical specifications

**Platform**
- Dimensions: 1,000 × 1,000 mm.
- ZARGES Sigma padding around and under the platform.

**Stair**
- Width of 800 mm with 320 mm deep steps.

**Flooring**
- ZARGES aluminium profile with corrugated surface, anti-slip.

**Handrails & guardrail**
- (Platform guardrail: double-sided, easily sliding with ergonomic operation at handrail level, fixed.
- Higher accident prevention through gapless transition between handrails and platform guardrails.

**Undercarriage**
- Maximum clearance height of 150 mm.
- Light aluminium frame with steel front axle.
- Easy-to-use jack-up system for working and parking position.

Options

**Wide platform**
- Extended working area.
- Width 2,000 and 2,500 mm.
- Depth 1,000 mm.

**Retractible, swivelling guardrail**
- Double-sided guardrail swivelling by 90° (only 1,000 mm platforms).
- Swivelling supported by gas spring.
- Optimum fitting to open PAX door, landing gear and engines.

**Front gate**
- Safety door with handrail, midrail and toeboard 100 mm.
- Easy spring loaded operation towards the inside of the platform.

**Guardrail padding**
- Guardrail protection against damage.
- Material: PE foam with leather cover.
- Easy to place and remove by zip and push-button.

**Spindles**
- Set of 2 spindles at the front axle with folding crank.
- Higher stability and useful in case of floor unevenness.

**Tow bar (6 km/h)**
- 2-parts, turnable.
- Coupling via eye-hook or spherical head.
- Foot clearance protection.
- Parking position: click back system at the stair.

**Outdoor use**
- Platform and steps with aluminium x-cut section, milled, anti-skid and permeable to water.
- Inc. CSE wheels Ø 400 mm and reflectors.

**Height adjustment**
- Hydraulic system per hand pump or pipe burst valve.
- Telescopic support structure with safety ratchet.

**Flooring**
- ZARGES aluminium profile with corrugated surface.

**Handrails & guardrail**
- Platform guardrail: double-sided, easily sliding.
- Stair handrail: double-sided, fixed.

**Undercarriage**
- Steel frame with front axle and easy-to-use jack-up system for working and parking position.
- Different types of undercarriage combinations.

Options

**Sliding guardrail**
- Double-sided slideable guardrail.
- Bumpers on sides touching the aircraft (optionally available).
- Options: swing-out safety gates.

**Height adjustment**
- Hydraulic system per hand pump or pipe burst valve.
- Telescopic support structure with safety ratchet.

**Flooring**
- ZARGES aluminium profile with corrugated surface.

**Handrails & guardrail**
- Platform guardrail: double-sided, easily sliding.
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Further options

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- Easy to place and remove by zip and push-button.

Further options

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- Width 2,000 and 2,500 mm.
- Depth 1,000 mm.

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- Double-sided guardrail swivelling by 90° (only 1,000 mm platforms).
- Swivelling supported by gas spring.
- Optimum fitting to open PAX door, landing gear and engines.

Front gate
- Safety door with handrail, midrail and toeboard 100 mm.
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- Inc. CSE wheels Ø 400 mm and reflectors.

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- Hydraulic system per hand pump or pipe burst valve.
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- ZARGES aluminium profile with corrugated surface.

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- Platform guardrail: double-sided, easily sliding.
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Guardrail padding
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ZARGES maintenance stairs with adjustable heights are suitable for a wide range of aircraft maintenance tasks. They are easily adjusted using hydraulic devices and simple to move.

Technical specifications

**Platform**
- Dimensions: 1,000 × 1,000 mm.
- ZARGES Sigma padding around and under the platform.

**Stair**
- Width of 800 mm with 320 mm deep steps.

**Height adjustment**
- Hydraulic system per hand pump or pipe burst valve.
- Telescopic support structure with safety ratchet.

**Flooring**
- ZARGES aluminium profile with corrugated surface.

**Handrails & guardrail**
- Platform guardrail: double-sided, easily sliding.
- Stair handrail: double-sided, fixed.

**Undercarriage**
- Steel frame with front axle and easy-to-use jack-up system for working and parking position.
- Different types of undercarriage combinations.
Special maintenance stairs and platforms from ZARGES are extremely variable in use. Find your solution together with our specialists.

UCAS (Under Cowling Access Stair) for line maintenance. Narrow and brace-free design to reach for example engines 1-4 on widebody aircraft.

Set of height-adjustable stairs for pylon and precooler access on A350 and B777.

Docking systems by ZARGES – nose to tail for civil and military aircraft!

The system includes several small modules suitable for multi- or single aircraft types, narrow- or widebody aircraft. Design and configuration depending on the customer requirements and with optimum fit to the specific contours such as engines and tail shape.

Dock No. A319 A320 A321 B737
Nose dock 1LH/RH X X X X
Fuselage module 2LH/RH X X X X
Fuselage module 3LH/RH X X X X
Fuselage module 4LH/RH X X X X
Fuselage module 5LH/RH X X X
Fuselage bridge 7 X X X X
Wing dock-inboard RL/RH X X X X
Wing dock-inboard RL/RH X X X X
Tail dock 11LH/RH X X X X

Nose docks

Single- or double-section solutions for access to the windshield, radome, PAX doors, nose wheel well and electronic bays.

Docking systems for maintenance, repair and overhaul (MRO)
Fuselage docks
One-level or two-level solutions for access to windows, emergency exits and cargo bays. Sliding panels for ideal contour adjustment.

APU docks
Brace-free design with sliding panels to open or close the platform. Gap in the middle allows lowering of parts/APU and direct loading by fork lift from the floor.

Wing docks
Outboard docks for access to the leading and trailing edge, engine, extrados and intrados and wing tips. Inboard docks for access to wheel well, engine, flaps and leading edge.

Horizontal stabiliser docks
Brace-free design with access to vertical stabilisers and ergonomic inclination of the working area. For tail-in configuration, docking and de-docking without moving the dock.

Engine docks
One-level or two-level solutions. Sliding panels by hand crank or manual operation for ideal contour adjustment.

Tail docks
Cantilever design with access to horizontal and vertical stabilisers, rudder, APU and rear passenger door. For tail-in configuration, docking and de-docking without moving the two modules.
Helicopter docking systems

Modular docking systems by ZARGES – nose to tail for civil and military helicopters!

The system includes several small modules suitable for multi- or single helicopter types for line or heavy maintenance. Design and configuration depending on the customer requirements and with optimum fit to the specific contours such as fuselage and tail shape.

Examples

<table>
<thead>
<tr>
<th>Dock</th>
<th>No.</th>
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</thead>
<tbody>
<tr>
<td>Fuselage module FWD</td>
<td>1/LH/RH</td>
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<td>Fuselage module AFT</td>
<td>2/LH/RH</td>
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<td>Tail module</td>
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<td>Blade washer stand</td>
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- Height-adjustable maintenance platform for SeaKing Mk41
- Foldable for air transport in special container
- Maintenance platform for Bell 206, Augusta 109, SA341, R44
- Maintenance platform for EC 145, height-adjustable
- Maintenance platform for Alouette
- Maintenance platform for Bell 206, Augusta 109, SA341, R44
- Maintenance platforms for Black Hawk
- Maintenance platforms for Black Hawk
Refuelling equipment

Universal refuelling stairs for all aircraft types and fast, safe and convenient refuelling at wind speeds up to 8 Beaufort. Refuelling equipment with nozzles, hoses, earthing device and coupling available as optional equipment.

Refuelling steps

Aluminum fixed-height steps – mobile, stable and safe in use. Single or double-sided.

- Platform height: 0.78/1.58 m.
- Working height: 2.00 to 3.60 m.
- Main aircraft type: regional jets.
- Safe working load: 150 kg.
- Big working platform of 400 × 400 mm for safe standing.
- Tray for aircraft fuel cap.
- Nozzle rest on side-piece.
- Double-sided foldable handrails with heat-shrink hose.
- Single-sided access.
- 3/4/5/6 steps.

Fixed-height refuelling stairs – uniaxial

Foot end of stairs folds away for towing for reduced space requirements when manoeuvering.

- Platform height: 1.50 m.
- Working height: 2.90 to 3.60 m.
- Main aircraft type: regional jets, narrowbodies.
- Platform dimensions: 500 × 800 mm.
- Overall dimensions: 3.210 × 2.000 × 2.500 mm.
- Flooring: graepel grating, antiskid and pervious to water.
- Guardrail height: 1,000 mm.
- Pneumatic tyres with ∅ 400 mm and tow bar for max 25 km/h.
- Uniaxial.

Height-adjustable refuelling stairs – small and large

Based on hydraulic elevation system. Optional single or double-sided refuelling equipment available.

- Platform height: 1.50–3.25 m, 2.00–4.25 m.
- Working height: 3.50 to 5.00 m, 4.00 to 6.20 m.
- Main aircraft type: widebodies.
- Platform dimensions: 1.000 × 800 mm.
- Overall dimensions for 3-550-325: 5.700 × 2.200 × 3.300 mm.
- Flooring: aluminium x-cut, antiskid and pervious to water.
- Guardrail height: 1.100 mm.
- Pneumatic tyres with ∅ 530 mm and tow bar for max 25 km/h.
- Incl. standard fueling equipment comprising: container, storage tray, pressure relief and spring balance.
08 Other maintenance equipment and accessories

- **Safety barrier for aircraft doors as fall protection**
- **Easy-fold maintenance stairs for minimum storage space**
- **Maintenance platform with detachable cover**
- **Maintenance platform for flap rigging of A320**
- **De-icing check vehicles**
- **Stairs with cover, height-adjustable from 3.25 up to 5.00 m**

### Accessories

- Alternative towing coupling available
- Spherical head
- NATO hook
- Flip-up, integrated fold-out steps to increase the working height
- Hydraulic jack-up system
- Material rack
- Tool tray

### Media

- **Compressed air**
- Media: built-in lights (normal or explosion-proof)
- Media: lighting (normal or explosion-proof)
- Media: electrics

- **Media – compressed air**
- **Media – signal systems**
- **Media – crane**
- **Material lock**
- Colouring of guardrails/handrails or complete stairs - Skydrol-resistant design possible
Examples of our service and quality:

- Pressure-sealed construction.
- Waterproof design.
- Cargo protected against shocks and vibrations.
- Stackable containers.
- Recesses for fork lifts, lifting lugs.
- Paint and labelling to customer specifications.
- Unlimited potential for built-in items, from single items to bulk material.

Special containers made from aluminium are individual, customer-specific solutions, designed to your specifications and manufactured using state-of-the-art technology. The areas of application include the storage and transport of large equipment, components, missiles and other components for air and space travel and industrial applications on land, by sea and air.

ZARGES also has the perfect solution for rail vehicles and industry.

Special solutions for rail vehicles and buses

Special solutions for industry and plant engineering

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